

NOAA and NOAA Partnership Stations Relative to the Storm 07/06/14 8 AN 07/05/14 8 AM Duck, NO 07/04/14 8 P.N Oregon Inlet Marina, NC USCG Station Hatteras, NC 07/04/14 8 AN Beaufort, NC Wrightsville Beach, NC 07/03/14 8 PM Springmaid Pier, SC 07/03/14 11 AM Charleston, SC Fernandina Beach, Fl Active Stations Extent TS Force Winds Extent Hurricane Force Winds

Storm Analysis

As of 07/03/2014 12:00 EDT, water levels along the Carolinas are currently ranging from 0.0 to 1.6 feet above tidal predictions. Wind speeds are increasing and barometric pressure is falling in South Carolina, but remain variable elsewhere along the coast. Wind speeds range from 9 to 18 knots with slightly higher gusts.

Water Level and Meteorological plots available below are updated automatically. A line denoting <u>Mean Higher High Water</u> (MHHW) is displayed to provide an approximate indication of when flooding inundation may occur.

For additional data, please see the <u>Center for Operational Oceanographic Products & Services</u> website. For more information or archived products and reports, please see the <u>Storm OuickLook</u> Homepage.

Analyst: AJH

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SELECT NATIONAL HURRICANE CENTER ADVISORY INFORMATION:

HURRICANE ARTHUR ADVISORY NUMBER 11

1100 AM EDT THU JUL 03 2014

...ARTHUR STRENGTHENS AS IT HEADS TOWARD THE NORTH CAROLINA COAST...

WATCHES AND WARNINGS

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CHANGES WITH THIS ADVISORY...

NONE.

SUMMARY OF WATCHES AND WARNINGS IN EFFECT...

A HURRICANE WARNING IS IN EFFECT FOR...

- \* SURF CITY NORTH CAROLINA TO THE NORTH CAROLINA/VIRGINIA BORDER
- \* PAMLICO SOUND
- \* EASTERN ALBEMARLE SOUND

A HURRICANE WATCH IS IN EFFECT FOR...

\* LITTLE RIVER INLET TO SOUTH OF SURF CITY

A TROPICAL STORM WARNING IS IN EFFECT FOR...

- \* SOUTH SANTEE RIVER SOUTH CAROLINA TO SOUTH OF SURF CITY
- \* THE NORTH CAROLINA/VIRGINIA BORDER TO CAPE CHARLES LIGHT

VIRGINIA...INCLUDING THE MOUTH OF THE CHESAPEAKE BAY

\* WESTERN ALBEMARLE SOUND

A HURRICANE WARNING MEANS THAT HURRICANE CONDITIONS ARE EXPECTED SOMEWHERE WITHIN THE WARNING AREA. PREPARATIONS TO PROTECT LIFE AND PROPERTY SHOULD BE RUSHED TO COMPLETION.

A HURRICANE WATCH MEANS THAT HURRICANE CONDITIONS ARE POSSIBLE WITHIN THE WATCH AREA. ANY DEVIATION OF THE FORECAST TRACK TO THE LEFT...OR AN INCREASE IN THE FORECAST SIZE OF ARTHUR WOULD LIKELY REQUIRE THE ISSUANCE OF HURRICANE WARNINGS FOR ALL OR PART OF THE HURRICANE WATCH AREA.

A TROPICAL STORM WARNING MEANS THAT TROPICAL STORM CONDITIONS ARE EXPECTED SOMEWHERE WITHIN THE WARNING AREA.

INTERESTS ALONG THE UNITED STATES EAST COAST NORTH OF THE WARNING AREA...PRIMARILY IN SOUTHEASTERN NEW ENGLAND...SHOULD MONITOR THE PROGRESS OF ARTHUR.

DISCUSSION AND 48-HOUR OUTLOOK

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AT 1100 AM EDT THE CENTER OF HURRICANE ARTHUR WAS LOCATED ABOUT 260 MI SW OF CAPE HATTERAS NORTH CAROLINA AND ABOUT 110 MI SSW OF CAPE FEAR NORTH CAROLINA. ARTHUR IS MOVING TOWARD THE NORTH-NORTHEAST NEAR 10 MPH. A TURN TOWARD THE NORTHEAST WITH AN INCREASE IN FORWARD SPEED IS EXPECTED TODAY...FOLLOWED BY A FURTHER INCREASE IN FORWARD SPEED TONIGHT AND FRIDAY. ON THE FORECAST TRACK...THE CORE OF ARTHUR IS EXPECTED TO APPROACH THE COAST OF NORTH CAROLINA IN THE HURRICANE WARNING AREA TONIGHT.

DATA FROM NOAA AND AIR FORCE RESERVE HURRICANE HUNTER AIRCRAFT INDICATE THAT MAXIMUM SUSTAINED WINDS HAVE INCREASED TO NEAR 90 MPH WITH HIGHER GUSTS. SOME ADDITIONAL STRENGTHENING IS FORECAST DURING THE NEXT 24 HOURS...AND ARTHUR IS EXPECTED TO BE A CATEGORY TWO HURRICANE WHEN IT PASSES OVER OR NEAR THE NORTH CAROLINA COAST. ARTHUR IS EXPECTED TO BEGIN WEAKENING FRIDAY NIGHT AND IS FORECAST TO BECOME A POST-TROPICAL CYLONE SATURDAY.

HURRICANE FORCE WINDS EXTEND OUTWARD UP TO 25 MILES FROM THE CENTER...AND TROPICAL STORM FORCE WINDS EXTEND OUTWARD UP TO 115 MILES.

THE LATEST MINUMUM CENTRAL PRESSURE ESTIMATED FROM RECONNAISSANCE AIRCRAFT DATA IS 981 MB.

HAZARDS AFFECTING LAND

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WIND...TROPICAL STORM CONDITIONS ARE EXPECTED TO REACH AND SPREAD NORTHWARD THROUGH THE TROPICAL STORM AND HURRICANE WARNING AREAS LATER TODAY AND TONIGHT. HURRICANE CONDITIONS ARE EXPECTED WITHIN PORTIONS OF THE HURRICANE WARNING AREA BY TONIGHT. HURRICANE-FORCE WINDS ARE POSSIBLE IN THE HURRICANE WATCH AREA BEGINNING THIS EVENING.

STORM SURGE...THE COMBINATION OF A DANGEROUS STORM SURGE AND THE TIDE WILL CAUSE NORMALLY DRY AREAS NEAR THE COAST TO BE FLOODED BY RISING WATERS. THE WATER COULD REACH THE FOLLOWING HEIGHTS ABOVE GROUND IF THE PEAK SURGE OCCURS AT THE TIME OF HIGH TIDE...

NORTH CAROLINA WITHIN THE HURRICANE WARNING AREA...3 TO 5 FT

PAMLICO AND ALBEMARLE SOUNDS...2 TO 4 FT

SOUTHERN NORTH CAROLINA AND NORTHEASTERN SOUTH CAROLINA...1 TO 3 FT

EXTREME SOUTHEASTERN VIRGINIA...1 TO 2 FT

THE HIGHEST WATER WILL OCCUR ALONG THE IMMEDIATE COAST IN AREAS OF ONSHORE FLOW. THE SURGE WILL BE ACCOMPANIED BY LARGE AND DAMAGING WAVES. SURGE-RELATED FLOODING DEPENDS ON THE RELATIVE TIMING OF THE SURGE AND THE TIDAL CYCLE...AND CAN VARY GREATLY OVER SHORT DISTANCES. FOR INFORMATION SPECIFIC TO YOUR AREA...PLEASE SEE PRODUCTS ISSUED BY YOUR LOCAL NATIONAL WEATHER SERVICE OFFICE AND THE NEW EXPERIMENTAL POTENTIAL STORM SURGE FLOODING MAP FOR MORE DETAILS.

RAINFALL...RAINFALL ACCUMULATIONS OF 3 TO 5 INCHES...WITH ISOLATED MAXIMUM AMOUNTS OF 7 INCHES...ARE EXPECTED OVER COASTAL AREAS OF NORTH CAROLINA THROUGH FRIDAY. RAINFALL ACCUMULATIONS OF 1 TO 2 INCHES ARE POSSIBLE ALONG THE UPPER COAST OF SOUTH CAROLINA.

TORNADOES...ISOLATED TORNADOES ARE POSSIBLE OVER PORTIONS OF COASTAL NORTH CAROLINA THROUGH TONIGHT.

SURF...SWELLS GENERATED BY ARTHUR ARE AFFECTING AREAS FROM THE EAST-CENTRAL COAST OF FLORIDA NORTHWARD TO SOUTH CAROLINA. THESE SWELLS ARE EXPECTED TO CAUSE LIFE-THREATENING SURF AND RIP CURRENTS.

FOR MORE INFORMATION...PLEASE MONITOR PRODUCTS ISSUED BY YOUR LOCAL NATIONAL WEATHER SERVICE FORECAST OFFICE.

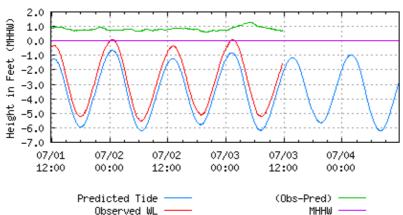
NEXT ADVISORY
NEXT INTERMEDIATE ADVISORY200 PM EDT
NEXT COMPLETE ADVISORY500 PM EDT.

FORECASTER BROWN

For the purpose of timely release, data contained within this QuickLook have undergone a "limited" NOS Quality Assurance/Control; however, the data have not yet undergone final verification. All data subject to NOS verification.

Jump to: Fernandina Beach - Water Level, Fernandina Beach - Winds, Fernandina Beach - Barometric, Charleston - Water Level, Charleston - Winds, Charleston - Barometric, Springmaid Pier - Water Level, Springmaid Pier - Winds, Springmaid Pier - Barometric, Wrightsville Beach - Water Level, Wrightsville Beach - Winds, Wrightsville Beach - Barometric, Beaufort - Water Level, Beaufort - Winds, Beaufort - Barometric, USCG Station Hatteras - Water Level, USCG Station Hatteras - Winds, Oregon Inlet Marina - Water Level, Oregon Inlet Marina - Winds, Oregon Inlet Marina - Barometric, Duck - Water Level, Duck - Winds, Duck - Barometric

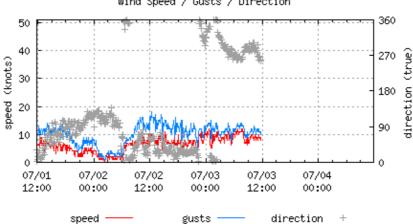
# NOAA/NOS/CO-OPS <u>8720030 Fernandina Beach, FL</u> Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Last Observed Sample: 07/03/2014 11:42 (EDT). Data relative to MHHW Observed: -1.60 ft. Predicted: -2.28 ft. Residual: 0.68 ft.

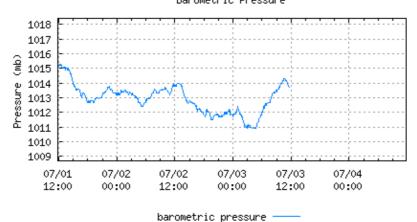
Historical Maximum Water Level: Oct 2 1898, 6.94 ft. Next High Tide: 07/03/2014 13:45 (EDT), -1.17 ft.

### NOAA/NOS/CO-OPS <u>8720030 Fernandina Beach, FL</u> Wind Speed / Gusts / Direction



Last Observed Sample: 07/03/2014 11:42 (EDT) Wind Speed: 9 knots Gusts: 11 knots Direction: 257° T

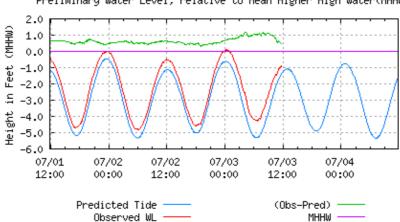
### NOAA/NOS/CO-OPS 8720030 Fernandina Beach, FL Barometric Pressure



Last Observed Sample: 07/03/2014 11:42 (EDT)

Barometric Pressure: 1013.7 mb

NOAA/NOS/CO-OPS <u>8665530 Charleston</u>, <u>SC</u>
Preliminary Water Level, relative to Mean Higher High Water(MHHW)



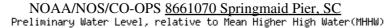
Last Observed Sample: 07/03/2014 11:42 (EDT). Data relative to MHHW Observed: -0.90 ft. Predicted: -1.36 ft. Residual: 0.46 ft. Historical Maximum Water Level: Sep 21 1989, 6.76 ft. Next High Tide: 07/03/2014 12:54 (EDT), -1.09 ft.

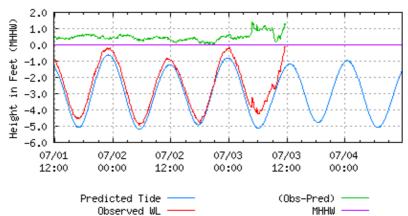
#### NOAA/NOS/CO-OPS 8665530 Charleston, SC Wind Speed / Gusts / Direction 360 50 40 270 direction (true) speed (knots) 30 180 20 90 10 Ô 07/01 07/02 07/03 07/03 07/04 12:00 00:00 12:00 00:00 12:00 00:00 speed gusts direction Last Observed Sample: 07/03/2014 11:42 (EDT)

Wind Speed: 13 knots Gusts: 19 knots Direction: 345° T

### NOAA/NOS/CO-OPS 8665530 Charleston, SC Barometric Pressure 1018 1017 1016 Pressure (mb) 1015 1014 1013 1012 1011 1010 1009 07/01 07/02 07/02 07/03 07/03 07/04 12:00 00:00 12:00 00:00 12:00 00:00 barometric pressure

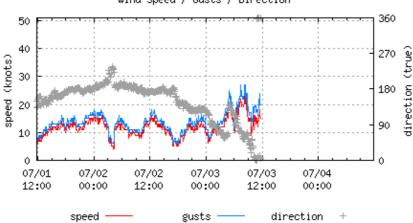
Last Observed Sample: 07/03/2014 11:42 (EDT)
Barometric Pressure: 1010.0 mb





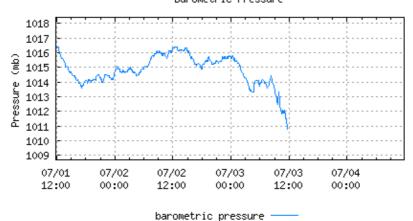
Last Observed Sample: 07/03/2014 11:42 (EDT). Data relative to MHHW Observed: -0.10 ft. Predicted: -1.35 ft. Residual: 1.25 ft. Historical Maximum Water Level: Jan 1 1987, 3.65 ft. Next High Tide: 07/03/2014 12:36 (EDT), -1.17 ft.

### NOAA/NOS/CO-OPS <u>8661070 Springmaid Pier, SC</u> Wind Speed / Gusts / Direction



Last Observed Sample: 07/03/2014 11:42 (EDT) Wind Speed: 15 knots Gusts: 20 knots Direction: 359° T

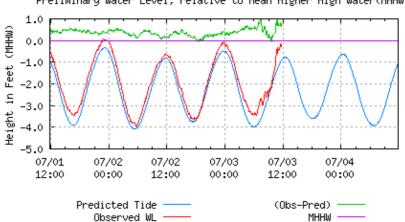
# NOAA/NOS/CO-OPS <u>8661070 Springmaid Pier, SC</u> Barometric Pressure



Last Observed Sample: 07/03/2014 11:42 (EDT)

Barometric Pressure: 1010.8 mb

NOAA/NOS/CO-OPS <u>8658163 Wrightsville Beach, NC</u>
Preliminary Water Level, relative to Mean Higher High Water(MHHW)

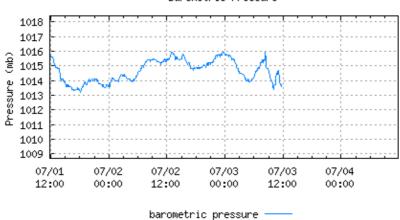


Last Observed Sample: 07/03/2014 11:42 (EDT). Data relative to MHHW Observed: -0.26 ft. Predicted: -0.90 ft. Residual: 0.64 ft. Historical Maximum Water Level: Sep 25 2008, 2.81 ft. Next High Tide: 07/03/2014 12:28 (EDT), -0.78 ft.

#### NOAA/NOS/CO-OPS 8658163 Wrightsville Beach, NC Wind Speed / Gusts / Direction 360 50 40 270 direction (true) speed (knots) 30 180 20 90 10 07/01 07/02 07/02 07/03 07/03 07/04 12:00 00:00 12:00 00:00 12:00 00:00 speed gusts direction

Last Observed Sample: 07/03/2014 11:42 (EDT) Wind Speed: 17 knots Gusts: 20 knots Direction: 110° T

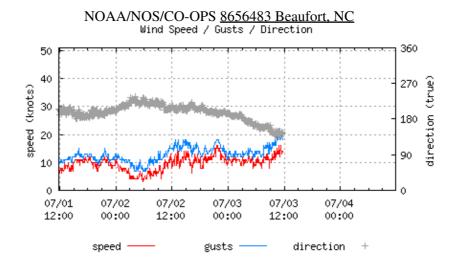
# NOAA/NOS/CO-OPS <u>8658163 Wrightsville Beach, NC</u> Barometric Pressure



Last Observed Sample: 07/03/2014 11:42 (EDT)
Barometric Pressure: 1013.7 mb

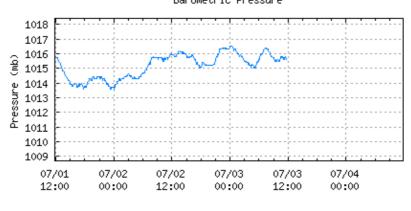
#### NOAA/NOS/CO-OPS 8656483 Beaufort, NC Preliminary Water Level, relative to Mean Higher High Water(MHHW) 1.0 Height in Feet (MHHW) 0.5 0.0 -0.5 -1.0 -1.5 -2.0 -2.5 -3.0 -3.5 07/02 07/02 07/03 07/03 07/01 07/04 12:00 00:00 12:00 00:00 12:00 00:00 Predicted Tide (Obs-Pred) Observed WL MHHW

Last Observed Sample: 07/03/2014 11:42 (EDT). Data relative to MHHW Observed: -0.38 ft. Predicted: -0.89 ft. Residual: 0.51 ft. Historical Maximum Water Level: Sep 14 2005, 3.01 ft. Next High Tide: 07/03/2014 12:53 (EDT), -0.65 ft.



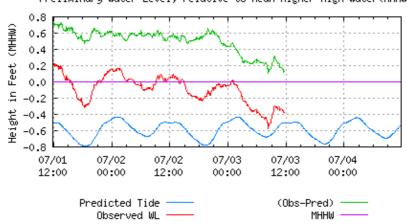
Last Observed Sample: 07/03/2014 11:42 (EDT) Wind Speed: 13 knots Gusts: 18 knots Direction: 137° T

### NOAA/NOS/CO-OPS <u>8656483 Beaufort, NC</u> Barometric Pressure



barometric pressure ——
Last Observed Sample: 07/03/2014 11:42 (EDT)
Barometric Pressure: 1015.6 mb

NOAA/NOS/CO-OPS <u>8654467 USCG Station Hatterss</u>, <u>NC</u>
Preliminary Water Level, relative to Mean Higher High Water(MHHW)

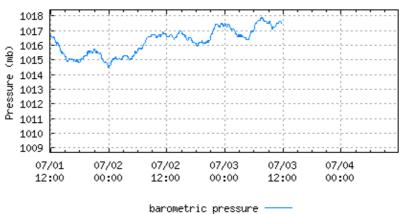


Last Observed Sample: 07/03/2014 11:42 (EDT). Data relative to MHHW Observed: -0.37 ft. Predicted: -0.50 ft. Residual: 0.13 ft. Historical Maximum Water Level: Oct 29 2012, 4.15 ft. Next High Tide: 07/03/2014 14:01 (EDT), -0.49 ft.

#### NOAA/NOS/CO-OPS 8654467 USCG Station Hatteras, NC Wind Speed / Gusts / Direction 360 50 40 270 direction (true) speed (knots) 30 180 20 90 10 Ô 07/01 07/02 07/02 07/03 07/03 07/04 12:00 12:00 12:00 00:00 00:00 00:00 speed gusts direction Last Observed Sample: 07/03/2014 11:42 (EDT)

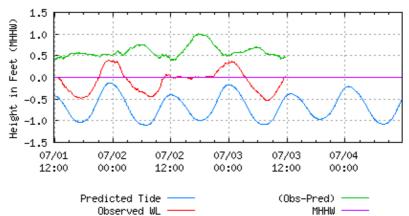
Wind Speed: 13 knots Gusts: 16 knots Direction: 156° T

## NOAA/NOS/CO-OPS <u>8654467 USCG Station Hatteras, NC</u> Barometric Pressure



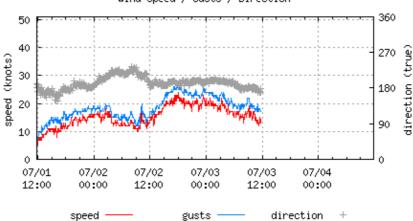
Last Observed Sample: 07/03/2014 11:42 (EDT)
Barometric Pressure: 1017.5 mb

### NOAA/NOS/CO-OPS <u>8652587 Oregon Inlet Marina, NC</u> Preliminary Water Level, relative to Mean Higher High Water(MHHW)



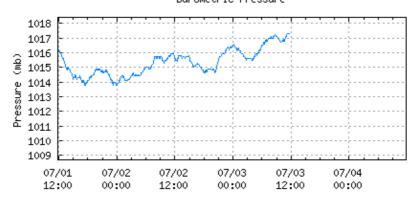
Last Observed Sample: 07/03/2014 11:48 (EDT). Data relative to MHHW Observed: 0.07 ft. Predicted: -0.43 ft. Residual: 0.50 ft. Historical Maximum Water Level: Aug 28 2011, 6.32 ft. Next High Tide: 07/03/2014 12:46 (EDT), -0.38 ft.

# NOAA/NOS/CO-OPS <u>8652587 Oregon Inlet Marina</u>, NC Wind Speed / Gusts / Direction



Last Observed Sample: 07/03/2014 11:48 (EDT) Wind Speed: 13 knots Gusts: 18 knots Direction: 176° T

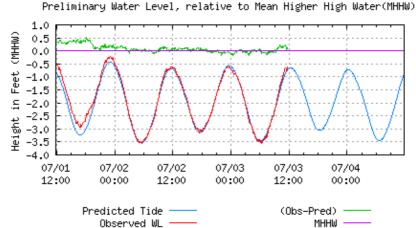
# NOAA/NOS/CO-OPS <u>8652587 Oregon Inlet Marina</u>, NC Barometric Pressure



barometric pressure —— Last Observed Sample: 07/03/2014 11:48 (EDT)

Barometric Pressure: 1017.4 mb

## NOAA/NOS/CO-OPS 8651370 Duck, NC

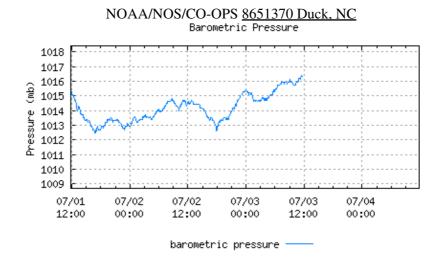


Last Observed Sample: 07/03/2014 11:42 (EDT). Data relative to MHHW Observed: -0.61 ft. Predicted: -0.73 ft. Residual: 0.12 ft. Historical Maximum Water Level: Sep 18 2003, 4.13 ft.

Next High Tide: 07/03/2014 12:19 (EDT), -0.65 ft.

#### NOAA/NOS/CO-OPS 8651370 Duck, NC Wind Speed / Gusts / Direction 360 50 40 270 direction (true) speed (knots) 30 180 20 90 10 0 07/01 07/02 07/02 07/03 07/03 07/04 12:00 00:00 12:00 00:00 12:00 00:00 speed gusts direction Last Observed Sample: 07/03/2014 11:42 (EDT)

Wind Speed: 11 knots Gusts: 14 knots Direction: 186° T



Last Observed Sample: 07/03/2014 11:42 (EDT)
Barometric Pressure: 1016.3 mb

## Latest Water Level Observations on MHHW

Station ID	Station Name	Date/Time	Observed Water Level	Predicted Tide	Residual Water Level	24 Hour Maximum Storm Tide
8720030	Fernandina Beach, FL	07/03/2014 11:42 (EDT)	-1.60 ft	-2.28 ft	0.68 ft	0.07 ft
8665530	Charleston, SC	07/03/2014 11:42 (EDT)	-0.90 ft	-1.36 ft	0.46 ft	0.11 ft
8661070	Springmaid Pier, SC	07/03/2014 11:42 (EDT)	-0.10 ft	-1.35 ft	1.25 ft	-0.10 ft
8658163	Wrightsville Beach, NC	07/03/2014 11:42 (EDT)	-0.26 ft	-0.90 ft	0.64 ft	-0.05 ft
8656483	Beaufort, NC	07/03/2014 11:42 (EDT)	-0.38 ft	-0.89 ft	0.51 ft	-0.10 ft
8654467	USCG Station Hatteras, NC	07/03/2014 11:42 (EDT)	-0.37 ft	-0.50 ft	0.13 ft	0.09 ft
8652587	Oregon Inlet Marina, NC	07/03/2014 11:48 (EDT)	0.07 ft	-0.43 ft	0.50 ft	0.37 ft
8651370	Duck, NC	07/03/2014 11:42 (EDT)	-0.61 ft	-0.73 ft	0.12 ft	-0.60 ft

Center for Operational Oceanographic Products & Services (CO-OPS) | National Ocean Service (NOS) National Oceanic and Atmospheric Administration | U.S. Department of Commerce